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# **California Board of Registered Nursing**

## **2009-2010 Annual School Report**

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Data Summary and Historical Trend Analysis

A Presentation of Pre-Licensure Nursing Education Programs in California

### **Greater Sacramento**

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## INTRODUCTION

Each year, the California Board of Registered Nursing (BRN) requires all pre-licensure registered nursing programs in California to complete a survey detailing statistics of their programs, students and faculty. The survey collects data from August 1 through July 31. Information gathered from these surveys is compiled into a database and used to analyze trends in nursing education.

The BRN commissioned the University of California, San Francisco (UCSF) to conduct a historical analysis of data collected from the 2000-2001 survey through the 2009-2010 survey. In this report, we present ten years of historical data from the BRN Annual School Survey. Data analyses were conducted statewide and for nine economic regions<sup>1</sup> in California, with a separate report for each region. All reports are available on the BRN website (<http://www.rn.ca.gov/>).

This report presents data from the 6-county Greater Sacramento region. Counties in the region include El Dorado, Placer, Sacramento, Sutter, Yolo, and Yuba. All data are presented in aggregate form and describe overall trends in the areas and over the times specified and, therefore, may not be applicable to individual nursing education programs. Additional data from the past ten years of the BRN Annual School Survey are available in an interactive database on the BRN website.

Data collected for the first time from the 2009-2010 survey are identified by the symbol (§). The reliability of these new data will be reviewed and considered for continued inclusion in future surveys.

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<sup>1</sup> The nine regions include: (1) Northern California, (2) Northern Sacramento Valley, (3) Greater Sacramento, (4) Bay Area, (5) San Joaquin Valley, (7) Central Coast, (8) Southern California I (Los Angeles and Ventura counties), (9) Southern California II (Orange, Riverside, and San Bernardino counties), and (10) Southern Border Region. Counties within each region are detailed in the corresponding regional report. The Central Sierra (Region 6) does not have any nursing education programs and was, therefore, not included in the analyses.

## DATA SUMMARY AND HISTORICAL TREND ANALYSES

This analysis presents pre-licensure program data from the 2009-2010 BRN Annual School Survey in comparison with data from previous years of the survey. Data items addressed include the number of nursing programs, enrollments, completions, retention rates, student and faculty census data, the use of clinical simulation by nursing programs, and clinical space and practice restrictions.

### Trends in Pre-Licensure Nursing Programs

#### *Number of Nursing Programs*

There are six nursing programs in the Greater Sacramento region that lead to RN licensure. Of these programs, five are ADN programs and one is a BSN program. The majority (83.3%) of pre-licensure nursing programs in the Greater Sacramento region are public.

#### **Number of Nursing Programs**

	<i>Academic Year</i>									
	<i>2000-2001</i>	<i>2001-2002</i>	<i>2002-2003</i>	<i>2003-2004</i>	<i>2004-2005</i>	<i>2005-2006</i>	<i>2006-2007</i>	<i>2007-2008</i>	<i>2008-2009</i>	<i>2009-2010</i>
<b>Total # Nursing Programs</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>6</b>	<b>6</b>
ADN Programs	4	4	4	4	4	5	5	5	5	5
BSN Programs	1	1	1	1	1	1	1	1	1	1
ELM Programs	-	-	-	-	-	1	1	1	-	-
Public Programs	5	5	5	5	5	6	6	6	5	5
Private Programs	-	-	-	-	-	1	1	1	1	1

#### *Admission Spaces and New Student Enrollments*

Both the number of admission spaces available for new student enrollments and the number of students filling those spaces have fluctuated since the 2005-2006 academic year. Available admission spaces and new student enrollments increased slightly in 2009-2010, after a decline in 2008-2009. Programs in the region continue to overenroll students: there were 542 admission spaces available, filled by 565 new student enrollments. The most frequently reported reason for doing so was to account for attrition.<sup>‡</sup>

#### **Availability and Utilization of Admission Spaces**

	<i>Academic Year</i>									
	<i>2000-2001</i>	<i>2001-2002</i>	<i>2002-2003</i>	<i>2003-2004</i>	<i>2004-2005</i>	<i>2005-2006</i>	<i>2006-2007</i>	<i>2007-2008</i>	<i>2008-2009</i>	<i>2009-2010</i>
Spaces Available	283	340	340	490	561	636	561	669	530	542
New Student Enrollments	278	340	340	486	563	663	624	722	552	565
% Spaces Filled	98.2%	100.0%	100.0%	99.2%	100.4%	104.2%	111.2%	107.9%	104.2%	104.2%

<sup>‡</sup> Data were collected for the first time in the 2009-2010 survey.

Despite the fluctuation in available admission spaces and new student enrollments, pre-license nursing programs in the Greater Sacramento Region continue to receive more applications requesting entrance into their programs than can be accommodated. Qualified applications increased by 22% (n=938) in 2009-2010, over the previous year. 89.2% (n=4,648) of qualified applications to the region's pre-license nursing education programs were not accepted for admission, which is an historic high.

### Applications Accepted and Not Accepted for Admission\*

	<i>Academic Year</i>									
	<i>2000-2001</i>	<i>2001-2002</i>	<i>2002-2003</i>	<i>2003-2004</i>	<i>2004-2005</i>	<i>2005-2006</i>	<i>2006-2007</i>	<i>2007-2008</i>	<i>2008-2009</i>	<i>2009-2010</i>
<b>Qualified Applications</b>	<b>434</b>	<b>691</b>	<b>866</b>	<b>886</b>	<b>1,859</b>	<b>2,421</b>	<b>2,391</b>	<b>4,032</b>	<b>4,275</b>	<b>5,213</b>
<i>Accepted</i>	278	340	340	486	563	663	624	722	552	565
<i>Not Accepted</i>	156	351	526	400	1,296	1,758	1,767	3,310	3,723	4,648
% Qualified Applications Not Accepted	35.9%	50.8%	60.7%	45.1%	69.7%	72.6%	73.9%	82.1%	87.1%	89.2%

\*Since these data represent applications rather than individuals, an increase in qualified applications may not represent equal growth in the number of individuals applying to nursing school.

New student enrollments increased only slightly in 2009-2010 (2.4%, n=13) over the previous year. However, there was a shift in the distribution of new enrollments, by program type. Enrollment in BSN programs increased dramatically (58.4%, n=59), whereas ADN enrollments declined by 10.2%, from 451 in 2008-2009 to 405 in 2009-2010. Historical data show that since 2004-2005, new student enrollment totals have fluctuated in all program types. In 2009-2010, public programs had slightly more students enroll in their programs compare to the previous year, while private programs had slightly fewer students enroll in their programs.

### New Student Enrollment by Program Type

	<i>Academic Year</i>									
	<i>2000-2001</i>	<i>2001-2002</i>	<i>2002-2003</i>	<i>2003-2004</i>	<i>2004-2005</i>	<i>2005-2006</i>	<i>2006-2007</i>	<i>2007-2008</i>	<i>2008-2009</i>	<i>2009-2010</i>
<b>New Student Enrollment</b>	<b>278</b>	<b>340</b>	<b>340</b>	<b>486</b>	<b>563</b>	<b>663</b>	<b>624</b>	<b>722</b>	<b>552</b>	<b>565</b>
ADN	188	220	220	359	392	461	440	561	451	405
BSN	90	120	120	127	171	138	184	161	101	160
ELM						64	0	0		
Private						11	28	54	72	64
Public	278	340	340	486	563	652	596	668	480	501

### Student Completions

Although the number of students that completed a nursing program in the Greater Sacramento region has more than doubled since 2000-2001, there was another drop in the number of students that completed nursing programs in the last year – from 575 students in 2008-2009 to 551 students in 2009-2010. Of the 551 students that completed a nursing program in Greater Sacramento this past year, 73% (n=402) completed an ADN program and 27% (n=149) completed a BSN program.

### Student Completions

	Academic Year									
	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010
<b>Student Completions</b>	<b>248</b>	<b>277</b>	<b>267</b>	<b>302</b>	<b>403</b>	<b>419</b>	<b>444</b>	<b>634</b>	<b>575</b>	<b>551</b>
ADN	162	171	173	189	294	304	332	347	406	402
BSN	86	106	94	113	109	115	112	233	169	149
ELM						0	0	54		

### Retention Rate

Of the 546 students scheduled to complete a nursing program in the 2009-2010 academic year, 67.2% (n=367) completed the program on-time, 15.9% (n=87) are still enrolled in the program, and 16.9% (n=92) dropped out or were disqualified from the program. This is the lowest retention rate over the past ten years and may be in part due to the historically high number of students still enrolled in programs.

### Student Cohort Completion and Retention Data

	Academic Year									
	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010
<b>Students Scheduled to Complete the Program</b>	<b>316</b>	<b>223</b>	<b>315</b>	<b>381</b>	<b>493</b>	<b>473</b>	<b>519</b>	<b>584</b>	<b>532</b>	<b>546</b>
Completed On Time	237	171	258	298	382	350	353	442	432	367
Still Enrolled	22	13	25	43	23	31	49	22	39	87
Attrition	57	39	32	40	88	92	117	120	61	92
Completed Late <sup>‡</sup>										32
<b>Retention Rate*</b>	75.0%	76.7%	81.9%	78.2%	77.5%	74.0%	68.0%	75.7%	81.2%	67.2%
<b>Attrition Rate</b>	18.0%	17.5%	10.2%	10.5%	17.8%	19.5%	22.5%	20.5%	11.5%	16.9%
<b>% Still Enrolled</b>	7.0%	5.8%	7.9%	11.3%	4.7%	6.5%	9.5%	3.8%	7.3%	15.9%

\*Retention rate = (students who completed the program on-time) / (students scheduled to complete the program)

There has been fluctuation in the retention and attrition rates over the ten-year period documented in the above table. There were changes to the survey between 2003-2004 and 2004-2005, and between 2004-2005 and 2005-2006 that may have affected the comparability of these data over time.

<sup>‡</sup> Data were collected for the first time in the 2009-2010 survey. These completions are not included in the calculation of either the retention or attrition rates.

### *Student Census Data*

The declining trend in the total number of students enrolled in pre-license nursing programs in Greater Sacramento that began during the 2007-2008 academic year, continued in 2010. On October 15, 2007, the region's programs had a total enrollment of 1,166 students, which fell to 950 students on October 15, 2010.

#### **Student Census Data\***

<b>Program Type</b>	<b>Year</b>									
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
ADN Program	377	409	519	637	393	731	705	722	740	665
BSN Program	259	271	318	352	351	353	401	357	286	285
ELM Program						60	60	0		
<b>Total Nursing Students</b>	<b>636</b>	<b>680</b>	<b>837</b>	<b>989</b>	<b>744</b>	<b>1,144</b>	<b>1,166</b>	<b>1,079</b>	<b>1,026</b>	<b>950</b>

\*Census data represent the number of students on October 15<sup>th</sup> of the given year.

### *Clinical Simulation in Nursing Education*

All of the schools (100%) in the Greater Sacramento region with pre-licensure nursing programs reported using clinical simulation<sup>2</sup> in 2009-2010. All schools (100%) reported that they use clinical simulation to standardize clinical experiences and to provide clinical experience not available in a clinical setting, and five out of six schools reported using clinical simulation to check clinical competencies and to make up for clinical experiences. Data also indicated that five out of six nursing schools in the region have plans to expand their use of clinical simulation.

<b>Reasons for Using a Clinical Simulation Center*</b>	2007-2008	2008-2009	2009-2010
To standardize clinical experiences	75.0%	66.7%	100%
To provide clinical experience not available in a clinical setting	75.0%	100%	100%
To check clinical competencies	75.0%	100%	83.3%
To make up for clinical experiences	100%	66.7%	83.3%
To increase capacity in your nursing program	25.0%	33.3%	16.7%
<b>Number of schools that use a clinical simulation center</b>	<b>4</b>	<b>6</b>	<b>6</b>

\*These data were collected for the first time in 2006-2007. However, changes in these questions for the 2007-2008 administration of the survey and lack of confidence in the reliability of the 2006-2007 data prevent comparability of the data. Therefore, data from previous years of the survey are not shown.

<sup>2</sup> Clinical Simulation Center/Experience - students have a simulated real-time nursing care experience using hi-fidelity mannequins and clinical scenarios, which allow them to integrate, apply, and refine specific skills and abilities that are based on theoretical concepts and scientific knowledge. The experience includes videotaping, de-briefing and dialogue as part of the learning process.

### *Clinical Space & Clinical Practice Restrictions<sup>‡</sup>*

Four of the region's six pre-licensure nursing programs (66.7%) reported being denied access to six clinical placement sites in 2009-2010 that had been available during the 2008-2009 academic year, affecting a total of 186 students. Overall, the most frequently reported reasons for why programs were denied clinical space were competition for space arising from an increase in the number of nursing students in the region, clinical staff nurses being overloaded, or some other reason. Other reasons included a change in clinical facility ownership and partial closure of a clinical facility.

Reasons for Clinical Space Being Unavailable	ADN	BSN	Total
	%	%	%
Competition for Clinical Space due to Increase in Number of Nursing Students in Region	66.7%	100%	75.0%
Staff Nurse Overload	66.7%	0.0%	50.0%
No Longer Accepting ADN Students	33.3%	0.0%	25.0%
Displaced by Another Program	33.3%	0.0%	25.0%
Clinical Facility Seeking Magnet Status	33.3%	0.0%	25.0%
Decrease in Patient Census	0.0%	0.0%	0.0%
Nursing Residency Programs	0.0%	0.0%	0.0%
Other	100%	0.0%	75.0%
Number of programs	3	1	4

All six nursing schools (100%) in the Greater Sacramento region reported that pre-licensure students in their programs had encountered restrictions to clinical practice imposed on them by clinical facilities. The most common types of restricted access students faced were to the clinical site itself due to a visit from the Joint Commission or another accrediting agency, bar coding medication administration, and access to electronic medical records. Schools reported that it was uncommon to have students face restrictions on direct communication with health care team members, access to IV medication administration, or an alternative clinical setting due to liability issues.

Type of Restricted Access	Percentage of Schools (%)					# Schools
	Very Uncommon	Uncommon	Common	Very Common	N/A	
Bar coding medication administration	0.0%	33.3%	16.7%	50.0%	0.0%	6
Electronic Medical Records	16.7%	16.7%	50.0%	16.7%	0.0%	6
Glucometers	0.0%	40.0%	20.0%	40.0%	0.0%	5
Automated medical supply cabinets	0.0%	16.7%	33.3%	16.7%	33.3%	6
IV medication administration	33.3%	50.0%	16.7%	0.0%	0.0%	6
Clinical site due to visit from accrediting agency (Joint Commission)	16.7%	0.0%	16.7%	66.7%	0.0%	6
Direct communication with health team	16.7%	50.0%	33.3%	0.0%	0.0%	6
Alternative setting due to liability	16.7%	50.0%	16.7%	16.7%	0.0%	6

<sup>‡</sup> Data were collected for the first time in the 2009-2010 survey.

### Faculty Census Data

The total number of nursing faculty in the Greater Sacramento region has fluctuated since the 2006-2007 academic year. In 2009-2010, the number of reported faculty declined 14.3% (n=25) compared to the previous year. Of the 150 total faculty in 2009, 57.3% (n=86) were full-time and 42.7% (n=64) were part-time.

The number of faculty vacancies in the region has varied over the past eight years. On October 15, 2010, there were three vacant faculty positions in Greater Sacramento. These vacancies represent a 2.0 % faculty vacancy rate, the lowest vacancy rate since 2005.

### Faculty Census Data<sup>1</sup>

	Year									
	2001	2002	2003	2004	2005 <sup>2</sup>	2006	2007	2008	2009	2010
<b>Total Faculty</b>	<b>97</b>	<b>106</b>	<b>115</b>	<b>125</b>	<b>132</b>	<b>125</b>	<b>163</b>	<b>156</b>	<b>175</b>	<b>150</b>
Full-time	62	68	72	66	66	54	83	79	84	86
Part-time	35	38	43	59	28	71	80	77	91	64
<b>Vacancy Rate**</b>		<b>3.6%</b>	<b>0.0%</b>	<b>3.8%</b>	<b>0.0%</b>	<b>2.3%</b>	<b>4.1%</b>	<b>4.9%</b>	<b>2.2%</b>	<b>2.0%</b>
Vacancies		4	0	5	0	3	7	8	4	3

\* The sum of full- and part-time faculty did not equal the total faculty reported in these years.

\*\*Vacancy rate = number of vacancies/(total faculty + number of vacancies)

1 - Census data represent the number of faculty on October 15<sup>th</sup> of the given year.

2 - Faculty vacancies were estimated based on the vacant FTEs reported.

### Summary

The Greater Sacramento region has seen the number of qualified applications to its nursing programs increase more than ten-fold since 2000-2001. Although the number plateaued between 2005-2006 and 2006-2007, there has been a sharp increase since that time. Qualified applications increased in 2009-2010 by 22% (n=938) over the previous year, and the 89.2% (n=4,648) that were not accepted for admission is an historic high.

In contrast, the number of admission spaces available, as well as the number of new student enrollments, has remained fairly stable over the past several years. In 2009-2010, the number of admission spaces available (n=542) and new student enrollments (n=565) are comparable to those reported in 2004-2005 (561 admission spaces and 563 new student enrollments).

Nursing program expansions in the region that led to a growing number of RN graduates from 2001 to 2008 have stabilized over the last two years. Fewer students graduated from nursing programs in the region in 2009-2010 than graduated in 2008-2009, marking two consecutive years of declining numbers of graduates. In addition to fewer graduations, the 2009-2010 retention rate (67.2%) was the lowest it has been in ten years.

All six of the Greater Sacramento region's schools with pre-licensure nursing programs reported using clinical simulation in 2009-2010. The importance of clinical simulation is underscored by



data collected for the first time in the 2009-2010 survey, which show that four of the six programs were denied access to clinical placement sites that were previously available to them. In addition, all of the schools (100%) reported that their students had faced restrictions to specific types of clinical practice or to the clinical site itself during the 2009-2010 academic year.

As program expansion in nursing education has slowed in recent years, the region's nursing program faculty has fluctuated. Schools reported a 14% decline in the number of faculty members in 2010 compared to the previous year. In 2010, three faculty vacancies were reported, representing a 2% faculty vacancy rate, which is the lowest it has been in the past five years.

## APPENDIX A – Greater Sacramento Nursing Education Programs

### ADN Programs

American River College  
 Sacramento City College  
 Sierra College  
 Carrington College (*formerly Western Career College – Sacramento*)  
 Yuba College

### BSN Programs

CSU Sacramento

## APPENDIX B – BRN Education Advisory Committee Members

### BRN Education Advisory Committee Members

#### Members

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